



## MELOx™ Yttria Stabilised Zirconias

MELOx™ yttria stabilised zirconias are high performance, high purity zirconium oxides suitable for use in a range of demanding applications.

MELOx™ stabilised zirconias are manufactured in the UK by a precisely controlled chemical precipitation process that ensures consistency of both purity and performance together with a fully homogeneous distribution of yttria.

### Features

Yttria stabilised zirconium oxides with high reactivity and sintering.

Spray-dried, free-flowing powders that are easy to handle.

Outstanding performance properties for final zirconia ceramic parts.

### Applications

MELOx™ stabilised zirconias are commonly used, for example, in:

- 3Y – wear parts, structural ceramics and dental prostheses
- 5Y – oxygen sensors
- 8Y – solid oxide fuel cell electrolytes

Discover more at

[www.luxfermeltechnologies.com](http://www.luxfermeltechnologies.com)

### Chemical composition (typical values)

Grade	Y <sub>2</sub> O <sub>3</sub> (wt%)	SiO <sub>2</sub> (wt%)	Fe <sub>2</sub> O <sub>3</sub> (wt%)
MELOx™ 3Y	5.3	0.02	0.01
MELOx™ 5Y	8.0	0.02	0.01
MELOx™ 8Y	13.6	0.02	0.01

### Physical properties (typical values)

Grade	Sintered flexural strength (MPa)*	Sintered density (g.cm <sup>-3</sup> )*	Powder particle size D <sub>50</sub> (µm)	Powder surface area (m <sup>2</sup> .g <sup>-1</sup> )
MELOx™ 3Y	>1000	6.05	0.45	10 - 17
MELOx™ 5Y	-	>5.95	0.45	10
MELOx™ 8Y	-	>5.90	0.45	10

\*Sintered at 1450 °C

### Packaging

Standard packaging is 25 kg packed into poly-lined fibre-board drums.

### Safety data sheet

Regional SDS information is available on request.

† The information contained within is meant as a guideline only

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